

Spiders from the Three Kings Islands

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The Three Kings Islands form a group lying about 35 miles to the north-west of Cape Maria van Diemen, the extreme northern tip of New Zealand. I am indebted to Mr. E. G. Turbott, of the Auckland Museum, and to Dr. G. Archey, its Director, for the opportunity of examining this collection of spiders. Most of the specimens were collected by Mr. Turbott on Great Island, but a few are from South West Island, and one from Stella Rock. Great Island is irregular in shape with greatest diameters of about $1\frac{1}{2}$ miles and rising to a height of some 1,000ft.; South West Island is oval, about a $\frac{1}{2}$ -mile long and 500ft. high.

In attempting to describe any general collection of New Zealand spiders at the present time, great difficulties are immediately encountered. Although over 300 species have been described, the great majority of the descriptions are worthless, and sometimes to identify even a common spider would necessitate a revision of the group to which it belongs. Accordingly, some of the following identifications are tentative, and in some cases identification has not been attempted. Little is known of the distribution of spiders in New Zealand, and more tends to be known of the faunae of small adjacent islands where special collecting has been done than of the main islands themselves.

The measurements were made by means of a micrometer eyepiece and are given in millimetres. The sizes and distances apart of the eyes are given in direct scale readings and so are comparative only. The different legs are denoted by Roman numerals and the leg indices are obtained by dividing the length of the leg by the length of the carapace. The tibial index, which gives a measure of the stoutness of the leg, is obtained by dividing the combined lengths of the patella and tibia by the diameter of the proximal end of the patella.

Two new genera and five new species are described, and the males of two already known species are described for the first time. Twenty-six species are represented in the collection, but identification is not attempted in five cases either because of immaturity or because of the difficulties already mentioned. The following is the list of species:

DIPLEURIDAE	DYSDERIDAE
<i>Aparna bipectinata</i> Todd	<i>Ariadna bellatoria</i> Dalmas
MIGIDAE	DRASSIDAE
<i>Migas paradoxus</i> L. Koch	<i>Scotophocus pretiosus</i> (L. Koch)
PSECHRIDAE	CLUBIONIDAE
<i>Matuchia ramulicola</i> Dalmas	<i>Clubiona peculiaris</i> L. Koch
	<i>Chiracanthium insulare</i> n. sp.
DICTYNIDAE	THOMISIDAE
? <i>Epimecinus</i> sp.	<i>Diaea albolimbata</i> L. Koch

SALTICIDAE

Trite auricoma (Urquhart)
Trite bimaculata (Urquhart)
 Two other species

OXYOPIIDAE

Oxyopes gregarius (Urquhart)

LYCOSIDAE

Lycosa hilaris L. Koch
Lycosa sp.

AGELENIDAE

Cambridgea antipodiana (White)
Gaspasia nebulosa gen. et sp. nov.

THERIDIIDAE

Armigera turbotti gen. et sp. nov.
Moneta conifera (Urquhart)
Lithyphantes regius n. sp.
Theridion veruculatum Urquhart
Theridion longicrure n. sp.

TETRAGNATHIDAE

Tetragnatha flavida Urquhart

EPEIRIDAE

Argiope protensa L. Koch
Epeira sp.

DIPLEURIDAE

***Aparua bipectinata* Todd**

1 ♂, 11 ♀. Recorded from the camp and depot area, Tasman Valley, Castaway Valley, N.W. Cliffs, and in Maori Cave, important in the soil.

This species was described from Wanganui. The average length of the carapace of 12 females, the type and paratypes, is 4.7 mm., the limits being 3.6 and 6.0 mm. The specimens from Great Island are considerably larger, the average of 10 specimens being 6.7 mm., with limits 6.0 and 8.3 mm. In my own collection are four specimens from Cambridge, average length 6.1 mm. and one from Houhora, in the North Auckland peninsula, length 6.1 mm. The numbers are too small for certainty, but the suggestion of an increase in size on passing towards the north is interesting.

MIGIDAE

***Migas paradoxus* L. Koch**

3 ♀. In litter in the camp area. The species has been recorded from Auckland, New Plymouth and Wellington.

PSECHRIDAE

***Matachia ramulicola* Dalmas. Text fig. 1.**

4 ♂ and 1 imm., 1 ♀ and 1 imm. Collected in Maori Cave, in the tent at night and by beating kanuka. The species was described from specimens from Nelson and seems to be widespread, but the male has not previously been described.

Male.—Length, 6.72 mm. Carapace pale yellowish brown, slightly darker between the eyes and the thoracic groove, dark brown along the anterior margin and with faint radiating pale streaks. Appendages and sternum pale yellowish brown. Abdomen pale with brown markings. Mid-dorsally are two parallel streaks, and posterior to these three large and three very small chevrons with apices directed anteriorly. Antero-laterally are spots which become streaks along the sides and merge into a dark area on each side close to the spinnerets. Under side very lightly spotted. All specimens similarly coloured.

Carapace: Length 3.04 mm, breadth 1.96 mm. Low and smooth, truncated abruptly in front. Thoracic groove longitudinal.

Eyes: 8, all pale. From above the anterior row is very slightly recurved and the posterior row very slightly procurved. From in front the anterior row is straight, the posterior row procurved. Ratio of the sizes of the eyes and their distances apart: AM, 56; AL, 63; PM, 64; PL, 68; AM-AM, 40; AM-AL, 101; AM-PM, 62; PM-PM, 94; PM-PL, 108; L-L, 19; clypeus, 66.

Chelicerae: With boss. Long and tapering, the fang long and the groove very oblique. Two minute teeth on the retromargin of the groove and 4 on the promargin. Of these the next-but-one to the proximal end is about three times the size of the others. The groove is very slightly developed. A row of bristles parallel to each row of teeth, the prolateral being much the larger. Anterior surface of chelicerae with few or no bristles.

Maxillae: Long, with parallel sides, rounded anteriorly with the median corner truncated obliquely.

Lip: Rectangular, the anterior border slightly concave. A little more than half the length of the maxillae.

Sternum: Length 1.52 mm., breadth 1.16 mm. Rebordered, straight anteriorly and ending posteriorly in a point between the hind coxae. Lateral margins slightly indented opposite the coxae.

Palp: As in figure (text fig. 1). Tibia with bifurcated retrolateral apophysis. One distal dorsal spine on the patella, 2 on the femur, also a single one near the middle. Four trichobothria on the tibia.

<i>Legs:</i>	I	II	IV	III	Palp		
	4.95	4.01	2.78	2.59	1.38		
		Femur.	Pat. & Tib.	Metatarsus.	Tarsus.	Total.	
Palp		1.62	0.96	—	1.62	4.20	
I		3.36	5.32	4.69	1.71	15.08	
II		3.16	4.33	3.44	1.26	12.19	
III		2.33	2.75	2.26	0.53	7.87	
IV		2.42	3.11	2.04	0.90	8.47	

Tibial Index I 7.5. Tibial Index IV 9.5.

Three claws, the paired ones with 10 pectinations, the median one with 2 curved ones. The majority of the bristles on the legs and on the body also are clothed with fine setules throughout their length. Tarsi with spurious articulations. Very small tarsal organ distally situated. Trichobothria: 6 in a row decreasing in size proximally on tarsi I and II, 2 on III, 4 on IV. Similar rows occur on the metatarsi and tibiae. Spines: all legs similar. Metatarsus, 2 pairs and 1 ventral at the distal end, proximal half with 5 pro and 4 retro. Tibia, 1 distal dorsal, 2 pro and 4 retro, 1 ventral. Femur, 3 distal, 2 dorsal. The tibia and femur have rows of long hooked hairs. No calamistrum, only about half a dozen straggly hairs.

Abdomen: Length 3.84 mm., breadth 1.79 mm. Numbers of hooked hairs similar to those on the legs. Anterior median spinnerets large and triangular, touching at the base. Posterior spinnerets largest, end joint

conical. Median spinnerets and anal tubercle small. Cribellum undivided.

DICTYNIDAE

One immature Dictynid was collected under stones at the summit of South West Island. From consideration of its cheliceral teeth it clearly does not belong to the genus *Ixeuticus*, which is found throughout New Zealand, but possibly to *Epimecinus*, which occurs in Australia and New Caledonia. A revision of the Dictynids of New Zealand at present being carried out has already shown that some similar species occur in the Auckland district, so no description of the present specimen is given here.

DYSDERIDAE

Ariadna bellatoria Dalmas

2 ♀ and 1 imm. From under stones and bark. This species was described by Dalmas from a female from Taumarunui. Its clearest distinction from *A. barbiger* Simon is the greater number of spines on the anterior legs. The immature specimen, which may be a male, has fewer spines, but this is insufficient evidence for the presence of both species, especially as the male of neither has been described.

DRASSIDAE

Scotophoeus pretiosus (L. Koch)

1 ♂ and 1 imm., 2 ♀. In dry cave, Stella Rock and at the camp area, Great Island.

CLUBIONIDAE

Clubiona peculiaris L. Koch

1 ♂, 3 ♀ and 4 imm. In camp area and collected by beating kanuka in lower Tasman Valley.

Chiracanthium insulare n. sp. Text fig. 2.

1 ♂. Great Island.

Male.—Length 10.57 mm. Chelicerae, maxillae and lip chestnut brown. Carapace chestnut brown anteriorly shading to paler brown posteriorly. Sternum pale brown with chestnut margin, legs pale brown. Abdomen pale greyish brown with two pale patches side by side anteriorly, followed by 5 chevrons. Anterior end and posterior dorsal patch pale brown similar to carapace.

Carapace: Length 4.49 mm., breadth 3.58 mm. Smoothly domed above with longitudinal groove, sides curved and an indentation above the waist.

Eyes: 8, all pale. From above anterior row recurved, posterior row straight. Width of eyegroup 1.57 mm. Ratio of eyes and their distances apart: AM, 114; AL, 97; PM, 92; PL, 106; AM-AM, 70; AM-AL, 58; AM-PM, 94; PM-PM, 162; PM-PL, 145; L-L, 71; clypeus, 54.

Chelicerae: Stout and inclined anteriorly, the anterior surface somewhat geniculate and with bristles on the antero-median aspect. Groove very oblique with 2 promarginal teeth at the proximal end and 2 retro-marginal teeth, one proximal and the other near the base of the fang. A very pronounced swelling on the prolateral side close to the base of the fang, from which a row of bristles extends along the promargin of the groove.

Maxillae: Long, constricted in the middle, median anterior corner truncated obliquely.

Lip: Long with sides converging. Truncated anteriorly with a concave margin.

Sternum: Length 2.51 mm., breadth 1.78 mm. Oval and flat. Margin with points opposite and between the coxae.

Palp: As in figure (text fig. 2). Tarsus not swollen, no backwardly directed process, tibial apophysis small.

Legs: Leg IV is missing on both sides of this specimen.

	I	II	III	IV	Palp	
	3.24	2.73	2.32	—	0.93	
	Femur.	Pat. & Tib.	Metatarsus.	Tarsus.	Total.	
Palp	1.69	1.55	—	1.01	4.52	
I	3.96	5.18	3.28	2.83	15.25	
II	3.41	5.00	2.85	1.25	12.51	
III	3.56	3.84	2.56	1.04	11.00	
IV	—	—	—	—	—	

Tibial Index I 10.0.

Two claws apparently not pectinated. Claw tuft. Narrow scopula on tarsi and metatarsi I and II and on tarsus III. Spines: I and II, metatarsus, 2 proximal ventral; tibia 1 median ventro-prolateral; femur 1 distal prolateral, 1 median dorsal. III, metatarsus 3 pairs ventral; tibia 3 pairs ventral, 2 retrolateral; femur 2 dorsal, 2 dorsal prolateral, 1 dorso-retrolateral.

Abdomen: Length 5.60 mm., breadth 2.57 mm. Cylindrical, anterior end chitinised and with long bristles, double row of bristles down the dorsal side and others ventro-lateral. Six spinnerets, long and cylindrical, terminal joints of the dorsal ones very short. Tracheal spiracle appears to be close to the spinnerets.

This species is doubtfully put into the genus *Chiracanthium*. It does not have the usual backwardly directed process of the cymbium and it has a thoracic groove, but there are other members of the genus exceptional in these respects. It differs from *Chiracanthium stratioticum* L. Koch in the absence of the process of the cymbium.

THOMISIDAE

Diaea albolimbata L. Koch

4 ♀ and 2 imm. Great Island, beaten from kanuka at the Saddle, Tasman Valley and the east end. These specimens all show the pattern of reddish markings lateral to white ones, as figured by Dalmas but not by Koch.

SALTICIDAE***Trite auricoma* (Urquhart)**

1 ♀. Maori Burial Cave area, Great Island.

***Trite bimaculata* (Urquhart)**

2 ♂. Great Island.

The taxonomy of this family is in a most unsatisfactory condition, some 47 species having been described. It seems undesirable to add to this list until it has been revised. Two other species seem to be represented, each having 2 promarginal and 1 retromarginal teeth. One is represented by 1 ♀ from the camp on Great Island, the other by 3 ♂, 2 ♀ and 1 imm. collected by beating kanuka on Great Island. This resembles *Iotus rævus* (Urquhart) in general and in having a large lobe on the bulb of the male palp which extends proximally for about the length of the tibia. It differs, however, in the absence of a dorsal scutum on the abdomen mentioned by Bryant (1935, p. 67) but not by Urquhart (1892, p. 186), and in the presence of dark scales on the ventral side of the tibia and patella of leg I.

OXYOPIDAE***Oxyopes gregarius* (Urquhart)**

1 ♀. Beaten from kanuka in lower Tasman Valley, Great Island.

LYCOSIDAE***Lycosa hilaris* L. Koch**

1 ♀ and 1 imm. Great Island.

***Lycosa* sp.**

1 imm. Great Island. This clearly does not belong to the previous species, but is very immature.

AGELENIDAE***Cambridgea antipodiana* (White)**

1 ♀. Great Island, from under stone on Quadrat 1. In this specimen the median and lateral dark stripes on the carapace and the annulations on the legs are very well marked, while the abdomen shows only vague markings.

***Gasparia* gen. nov.**

Size small. Chelicerae with teeth on both margins of the groove. None of the spinnerets enlarged.

***Gasparia nebulosa* n. sp. Text fig. 3.**

1 ♀. Under stone under litter. Quadrat I, Great Island.

Female.—Length 3.84 mm. Carapace pale brown with dark lateral bands about one-third the distance from the edge to the centre formed of 4 or 5 coalescing marks. Dark round the eyes and a streak at the fovea. Appendages brown, the legs with dark bands on the

femora, tibiae and metatarsi, most marked on IV scarcely visible on I. Sternum pale brown. Abdomen pale with dark pattern. Mid-dorsally and anterior band followed by two small spots, followed by three chevrons. A dark band on each side expanding posteriorly into a mottled area reaching the chevrons. Ventral side pale with no marks.

Carapace: Length 1.49 mm., breadth 1.09 mm. Low and smooth, anterior and posterior margins straight.

Eyes: 8, AME dark. From above, anterior row slightly recurved, posterior row straight. Ratio of the sizes of the eyes and their distances apart: AM, 76; AL, 114; PM, 107; PL, 123; AM-AM, 58; AM-AL, 27; AM-PM, 116; PM-PM, 82; PM-PL, 72; L-L, 48; clypeus, 65. Breadth of eyegroup 0.44 mm.

Chelicerae: Groove oblique, 1 tooth on the promargin, 3 on the retromargin, the one nearest the fang being the largest.

Maxillae: More or less parallel, anterior median corner truncated.

Lip: Free, slightly longer than broad. Anterior margin slightly concave.

Sternum: Length 0.84 mm., breadth 0.71 mm. Smoothly rounded, with blunt projection between coxae IV.

Palp: Claw without pectinations. On the tibia 1 dorsal and 3 dorso-recto-lateral trichobothria.

<i>Legs</i> :	I	IV	II	III	Palp				
	2.55	2.50	2.29	2.00	0.94				
		Femur.	Pat. & Tib.	Metatarsus.	Tarsus.	Total.			
Palp		0.49	0.50	—	0.41	1.40			
I		1.09	1.37	0.83	0.49	3.78			
II		1.01	1.20	0.69	0.51	3.41			
III		0.81	1.04	0.60	0.51	2.96			
IV		1.10	1.31	0.80	0.51	3.72			

Tibial Index I 7.9. Tibial Index IV 8.5.

Three claws, the dorsal with 8 pectinations, the ventral with 2 which are long, slender and curved. Trichobothria: tarsus with a row of 4 increasing in size distally; metatarsi I and II with 2, III and IV with 3; tibiae I and II with 3, III and IV with 5. Spines or stout bristles; metatarsus and tibia I and II each with 3 pairs, III and IV irregularly arranged; 1 dorsal on each femur. Tarsal organ small, on I 15% of the length of the tarsus from the distal end.

Abdomen: Length 2.24 mm., breadth 1.52 mm. Spinnerets normal, posterior slightly the largest. Anterior separated by less than their diameter. Tuft of bristles in place of colulus. Anal tubercle small. Epigynum as in figure, a slight elevation in the centre and the brown spermathecae showing through the surface.

THERIDIIDAE

Armigera gen. nov.

Male with dorsal and epigastric sclerites, and a less hardened one surrounding the spinnerets. Stridulating organ at the waist. Cheliceral

groove with teeth on both margins. Colulus present. One pair of book lungs, and an unbranched pair of abdominal tracheae opening together posteriorly. Female not known.

Armigera turbotti n. sp. Text fig. 4.

2 ♂. Under stones, Quadrat I, Great Island.

Male.—Length 1.56 mm. Dark chestnut brown, appendages slightly lighter.

Carapace: Length 0.87 mm., breadth 0.67 mm. High, with vertical clypeus. Slightly concave posterior surface where overhung by the abdomen. Carapace, sternum and the hard sclerites on the abdomen with a uniform granular surface.

Eyes: 8, AME dark. From above, anterior row strongly recurved, posterior row straight. Ratio of the diameters of the eyes and their distances apart: AM, 105; AL, 94; PM, 105; PL, 103; AM-AM, 57; AM-AL, 32; AM-PM, 70; PM-PM, 108; PM-PL, 66; L-L, 0; clypeus, 225. Breadth of eyegroup 0.37 mm.

Chelicerae: Small and vertical.

Maxillae: Broad, truncated anteriorly, with black serrula. Outer margins parallel, inner margin converging but not meeting.

Lip: Free, more or less semicircular.

Sternum: Length 0.41 mm., breadth 0.43 mm. Heart-shaped with a blunt posterior end widely separating coxae IV and joined to the carapace behind them.

Palp: Slender, with large palpal organ, as in figure. The embolus is long. On the prolateral side it is bent into a circle then turns back on itself, passes between the bulb and the cymbium and turns again as in the figure.

<i>Legs:</i>	I	II	IV	III	Palp	
	3.02	2.28	1.84	1.40	1.05	
		Femur.	Pat. & Tib.	Metatarsus.	Tarsus.	Total.
Palp		0.34	0.18	—	0.34	0.95
I		0.89	0.91	0.53	0.33	2.66
II		0.62	0.68	0.38	0.29	1.97
III		0.39	0.36	0.25	0.21	1.21
IV		0.51	0.47	0.34	0.28	1.60

Tibial Index I 9.9. Tibial Index IV 13.4.

Three claws with few pectinations. Few pectinated bristles, no more on IV. No spines. Trichobothria: 1 on metatarsi, 2 on tibiae. Tarsal organ present, on I 63% of the length of the tarsus from the distal end.

Abdomen: Length 1.12 mm., breadth 0.90 mm. The whole dorsal surface covered by a single smoothly-domed sclerite. An epigastric sclerite covers the anterior two-thirds of the ventral surface, lateral to it on each side is a very small sclerite, and an annular one surrounds the

spinnerets. In the cuticle covering the remainder are small thickenings forming longitudinal ridges, three of which pass dorsal to the spinnerets.

The skin of the other specimen was prepared by boiling in potash, when further details were visible. The promargin of the cheliceral groove has 2 teeth at the ventral end, the retromargin 3 smaller ones about the middle. There is a well-developed stridulating organ, consisting of the posterior slope of the carapace where it is overhung by the abdomen. This is covered with fine transverse striations. Rubbing upon it is a pair of small projections on the abdomen, each provided with a dorsal bristle, arising on the part of the epigastric sclerite which passes dorsal to the waist. The respiratory system consists of a pair of book-lungs and a pair of unbranched tracheae arising close to the spinnerets and confined to the abdomen. A small colulus is present bearing two bristles. The sclerite surrounding the spinnerets, which in the intact animal resembles the others, in the cleared skin is seen to be much thinner.

It seems that this species may belong to the sub-family Pholcommatinae of the Theridiidae. Several genera formerly placed here have been removed because they were found not to possess lungs, but more study seems necessary to clear up the relationships. In the meantime the present species is placed in a new genus.

Lithyphantes regius n. sp. Text fig. 5.

1 ♀. Great Island.

Female.—Length 3.90 mm. Carapace, chelicerae and sternum chestnut brown, palps and legs brown. Abdomen reddish brown with irregular more or less interrupted mottled white bands round the edge of the dorsal surface and in the mid-dorsal line. The mid-dorsal band is continuous with the marginal one anteriorly and posteriorly.

Carapace: Length 1.66 mm., breadth 1.30 mm. Heart-shaped. Thoracic groove, shallow, transverse, recurved.

Eyes: 8, all pale. From above anterior row strongly recurved, posterior row straight, from in front anterior row straight, posterior row procurved. Ratio of eyes and their distances apart: AM, 98; AL, 137; PM, 117; PL, 119; AM-AM, 96; AM-AL, 107; AM-PM, 128; PM-PM, 115; PM-PL, 105; L-L, 32; clypeus, 200.

Chelicerae: Vertical. Fang stout. No groove, but one blunt tooth prolaterally placed.

Maxillae: Converging but not meeting over the lip.

Lip: Free, rounded anteriorly, broader than long.

Sternum: Length 0.82 mm., breadth 0.79 mm. Heart-shaped with finely grooved surface.

Palp: Claw with 5 pectinations. Pectinated bristles present and 1 trichobothrium on the tibia.

Legs:	I	IV	II	III	Palp		
	2.94	2.92	2.49	2.15	0.89		
		Femur.	Pat. & Tib.	Metatarsus.	Tarsus.	Total.	
Palp		0.51	0.47	—	0.49	1.47	
I		1.39	1.71	1.06	0.71	4.87	
II		1.22	1.43	0.91	0.57	4.13	
III		1.06	1.21	0.76	0.53	3.56	
IV		1.39	1.75	1.03	0.69	4.86	

Tibial Index I 8.3. Tibial Index IV 8.1.

Three claws, the paired ones with 10 pectinations on I and 5 on IV. Tarsal organ small, situated 29% of the length from the distal end in I. Pectinated bristles along the length of tarsus IV, a few only on the other legs. No spines. Trichobothria: tibiae 3, metatarsi 1.

Abdomen: Length 3.16 mm., breadth 2.42 mm. Oval, overhanging the carapace to about its middle. Spinnerets small. Colulus slender, about half the length of the anterior spinnerets. Epigynum anterior to the furrow. It has a pale transparent projection arising from a pale ridged area through which was visible the dark spermathecae. The ridges encircle the projection and its base, run transversely anterior and posterior to it and form a whorl on each side.

This species differs from *Lithyphantès lepidus* in its smaller size and general reddish instead of blackish colour, though the white markings on the abdomen are similar. The epigynum of *L. lepidus*, figured by Dalmas, has a smaller projection, ridges arranged concentrically and a median V-shaped chitinised structure. *L. lepidus* has only been recorded from the South Island.

Moneta conifera (Urquhart). Text fig. 6.

1 ♂ and 1 imm., 7 ♀. Great Island, collected by beating kanuka. Described from Waiwera, Te Karaka, Auckland Province, this species is widespread. The male has not previously been described.

Male.—Length 3.30 mm. Carapace, sternum and appendages brown, abdomen pale mottled above and on the sides, grey below. Some reddish brown streaks on the sides, especially posteriorly.

Carapace: Length 1.18 mm., breadth 0.96 mm. Heart-shaped, depressed above. In side view the outline is highest posteriorly and slightly concave, rising again towards the eyes. Clypeus projecting forward.

Eyes: 8, all pale, situated on reddish tubercles. From above anterior row strongly recurved, posterior row straight. Ratio of eyes and their distances apart: AM, 100; AL, 105; PM, 95; PL, 102; AM-AM, 94; AM-AL, 59; AM-PM, 63; PM-PM, 103; PM-PL, 73; L-L, 0; clypeus, 200.

Chelicerae: Small, apparently no teeth on the margins of the groove.

Lip: As long as broad.

Maxillae: Strongly curved inwards and almost meeting above the lip.

Sternum: Length 0.81 mm., breadth 0.50 mm. Flat, slightly rough surface. Extends between the bases of the legs, and broadly between coxae IV.

Palp: As in figure (text fig. 6). 1 trichobothrium on tibia.

	I	IV	II	III	Palp		
<i>Legs</i> :	5.59	4.35	2.88	1.65	1.81		
		Femur.	Pat. & Tib.	Metatarsus.	Tarsus.	Total.	
Palp	0.71	0.51	—	0.93	2.15		
I	2.22	2.10	2.03	0.29	6.64		
II	1.13	1.22	0.85	0.21	3.41		
III	0.54	0.70	0.48	0.23	1.95		
IV	1.71	1.53	1.62	0.63	5.49		
	Tibial Index I 13.3.		Tibial Index IV 11.3.				

Three claws on an onychium, dorsal claws with 2 or 3 pectinations, apparently 1 small one on the ventral claw. Tarsal organ one-third the length of the tarsus from the proximal end. Tarsus IV with pectinated bristles along its whole length, the distal ones on the metatarsus also pectinated. Trichobothria: none on the tarsi, metatarsi I, II and III with a very large one, almost as long as the tarsus, at the distal end, tibiae I, II and III with 3, tibia IV with 4.

Abdomen: Length 2.16 mm., breadth 0.95 mm. Bluntly pointed behind, indented above the waist. No dorsal protuberance in this specimen. 6 spinnerets subterminal, together with the anal tubercle forming a rounded group. No colulus.

***Theridion veruculatum* Urquhart**

3 ♂ and 2 imm., 3 ♀ and 4 imm. Beaten from kanuka on Great Island. Said by Dalmas to be common in both North and South Islands.

***Theridion longicrura* n. sp. Text fig. 7.**

1 ♂. Great Island.

Male.—Length 2.78 mm. Pale greyish brown, area between and behind the eyes as far as the fovea, brown, margin of carapace, grey. Abdomen thickly mottled with white.

Carapace: Length 1.29 mm., breadth 1.06 mm. Low, rounded in outline but slightly constricted behind the bases of the chelicerae.

Eyes: 8, AME dark. From above, anterior row strongly recurved, posterior row slightly procurved. Ratios of the diameters of the eyes and their distances apart: AM, 108; AL, 97; PM, 100; PL, 113; AM-AM, 131; AM-AL, 85; AM-PM, 107; PM-PM, 108; PM-PL, 140; L-L, 0; clypeus, 170. Breadth of eyegroup, 0.48 mm.

Chelicerae: Promargin of the groove with a large tooth having a small one at its base.

Maxillae: Twice as long as lip, margins more or less straight so that the anterior angles are sharp. Wider distally, converging but not meeting.

Lip: As wide as long.

Sternum: Length 0.69 mm., breadth 0.76 mm. Truncated where it meets the lip with a well-marked indentation on each side at the base of each maxilla. Extends between coxae IV to touch the carapace, whose edge passes ventral to the waist.

Palp: Slender, with small palpal organ, as in figure (text fig. 7). Two trichobothria on tibia.

<i>Legs</i> :	I	II	IV	III	Palp	
	5.72	3.75	3.43	2.34	0.92	
		Femur,	Pat. & Tib.	Metatarsus.	Tarsus.	Total.
Palp		0.48	0.38	—	0.33	1.19
I		2.30	2.34	2.03	0.71	7.38
II		1.51	1.57	1.24	0.52	4.84
III		0.96	0.92	0.84	0.36	3.08
IV		1.49	1.40	1.16	0.38	4.43
		Tibial Index I 7.6.		Tibial Index IV 9.9.		

Three claws. On I the proclaw has a single large pectination near the tip, the retroclaw has six large pectinations and the median claw has one small one near its centre. Below the base of the median claw is a stout, blunt, upcurved projection. Few pectinated bristles except on IV, where they are very lightly pectinated and extend along the tarsus and on to the distal end of the metatarsus. No spines, but some stout bristles on tibiae and patellae. Two trichobothria on tibiae I and II, 3 on tibiae III and IV. On I the tarsal organ is 53% of the length of the tarsus from the distal end.

Abdomen: Length 1.78 mm., breadth 1.09 mm. Ovoid with the spinnerets postero-ventral. These are conical, the anterior being the stoutest. A colulus appears to be present but very small. A stridulating organ is present at the waist, consisting of a striated area on the posterior surface of the carapace and several small projections on the anterior end of the abdomen.

A large number of species of *Theridion* were described by Urquhart, the majority without figures or differential characters. The present specimen does not seem to correspond with any of the descriptions. It is provisionally placed in the genus *Theridion*, though it does seem to have a minute colulus. It is notable for the disproportionate length of the first pair of legs.

TETRAGNATHIDAE

Tetragnatha flavida Urquhart

1 ♂, 4 ♀. Great Island. Beaten from kanuka. One female is much larger than the rest, but the details of the chelicerae resemble this species and Dalmas says that its size is very variable.

EPEIRIDAE

Argiope protensa L. Koch

1 ♂, 1 ♀. Great Island, beaten from kanuka.

Epeira sp. Text fig. 8.

Some 53 species of *Epeira* have been described from New Zealand, the great majority on the basis of coloration, which is very variable, but the actual number of species is clearly much less than this. Many of the species described are unrecognisable, and, with some exceptions, it is impossible to identify members of this genus until a revision has been undertaken.

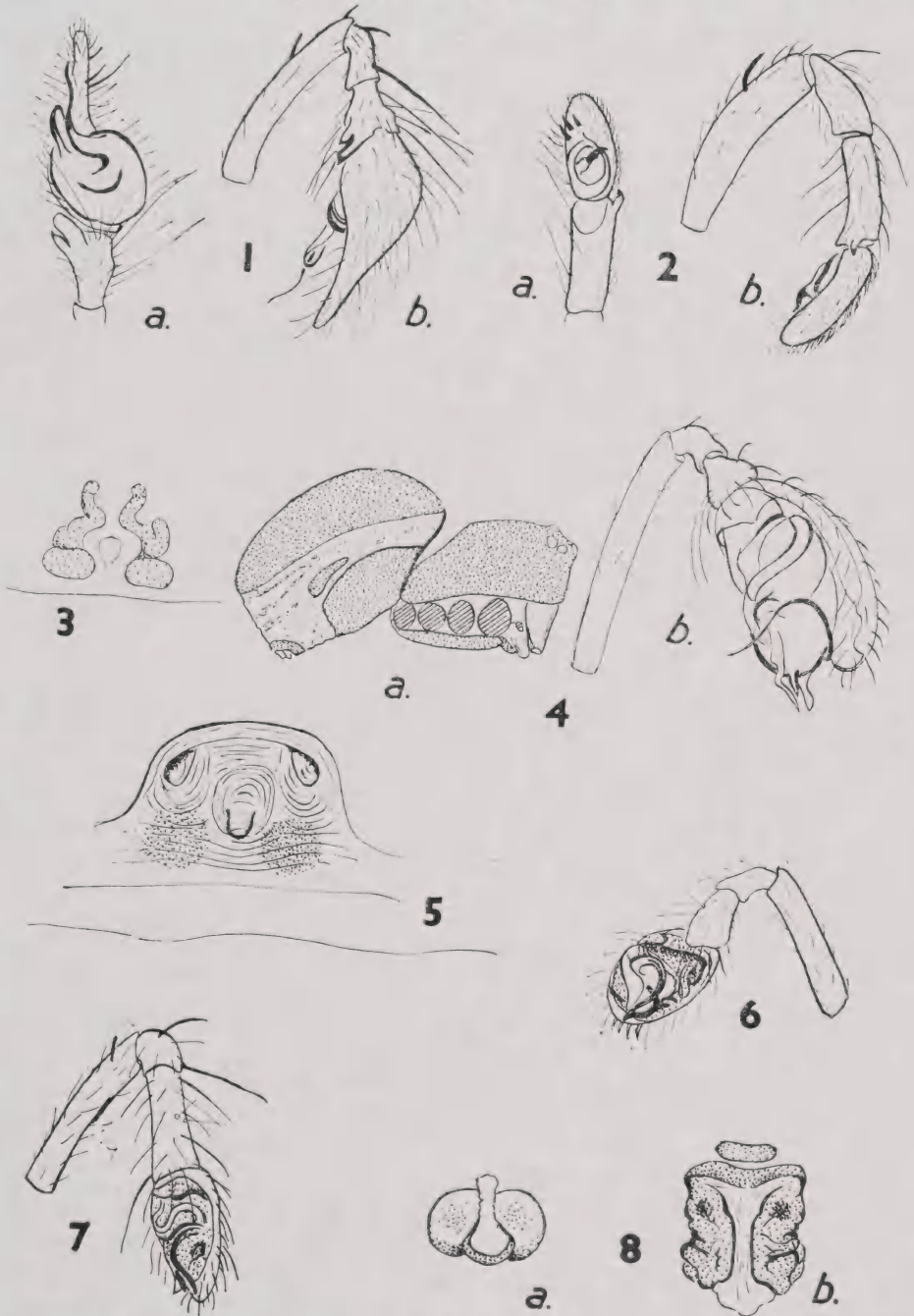


Fig. 1. *Matachia ramulicola*. (a) Ventral view, and (b) retrolateral view of the right palp of the male.
 Fig. 2. *Chiracanthium insulare*. (a) Ventral view of the left palp of the male. (b) Retrolateral view of the right palp of the male.
 Fig. 3. *Gasparia nebulosa*. Ventral view of epigynum.
 Fig. 4. *Armigera turbotti*. (a) View of the right side of the male with legs removed, the sclerites shown stippled. (b) Retrolateral view of the right palp of the male.
 Fig. 5. *Lithyphantes regius*. Ventral view of epigynum.
 Fig. 6. *Moneta conifera*. Retrolateral view of left palp of male.
 Fig. 7. *Theridion longicurure*. Retrolateral view of right palp of the male.
 Fig. 8. *Epeira* sp. (a) Ventral view of epigynum. (b) View at right angles to "a" with the whole epigynum turned forward. The posterior end of the scape is seen above.

1 ♂, 19 ♀ and 6 imm. Great Island. This species appears to be the common if not the only Epeirid on the island. The total length is about 8 mm. and the colour pattern variable, but mostly grey and brown. The epigynum as seen in the figure consists of a smooth rounded structure with a short spoon-shaped scape, which may be turned freely forward. If the whole hard structure is turned more forcibly forward it is seen to be somewhat cylindrical and to appear as in the figure. This view is at right angles to the previous one and the posterior end of the scape appears at the top of the figure. The central part consists of soft white membrane, on each side of which is a tough sclerite with dark wrinkled edges. This epigynum resembles Dalmas' figure (fig. 53, p. 387), which he tentatively attributes to *E. venustus* Urquhart, though his figure does not very closely resemble that of Urquhart himself (1890, plate 21, fig. 12). Dalmas states, however, that in *E. venustus* the antero-lateral tubercles of the abdomen are very striking, while in the present specimens they are only slightly developed.

Three immature specimens from South West Island differ from the previous ones in having much more clearly annulated legs. Their abdominal colour pattern is, however, not unlike and they are probably of the same species.

SUMMARY.

The collection consists of 26 species of spiders from the Three Kings Islands, which lie about 35 miles north-west of the extreme northern tip of New Zealand. Two new genera and five new species are proposed as follows: Clubionidae, *Chiracanthium insulare*; Agelenidae, *Gasparia nebulosa*; Theridiidae, *Armigera turbotti*; Lithyphantines, *Theridion longicrura*. The males of the following species are also described: *Matachia ramulicola* Dalmas; *Moneta comifera* (Urquhart).

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